

VTF 2006

VIA Technology Forum

VIA High Definition Platforms

Product Marketing
Weber Chuang

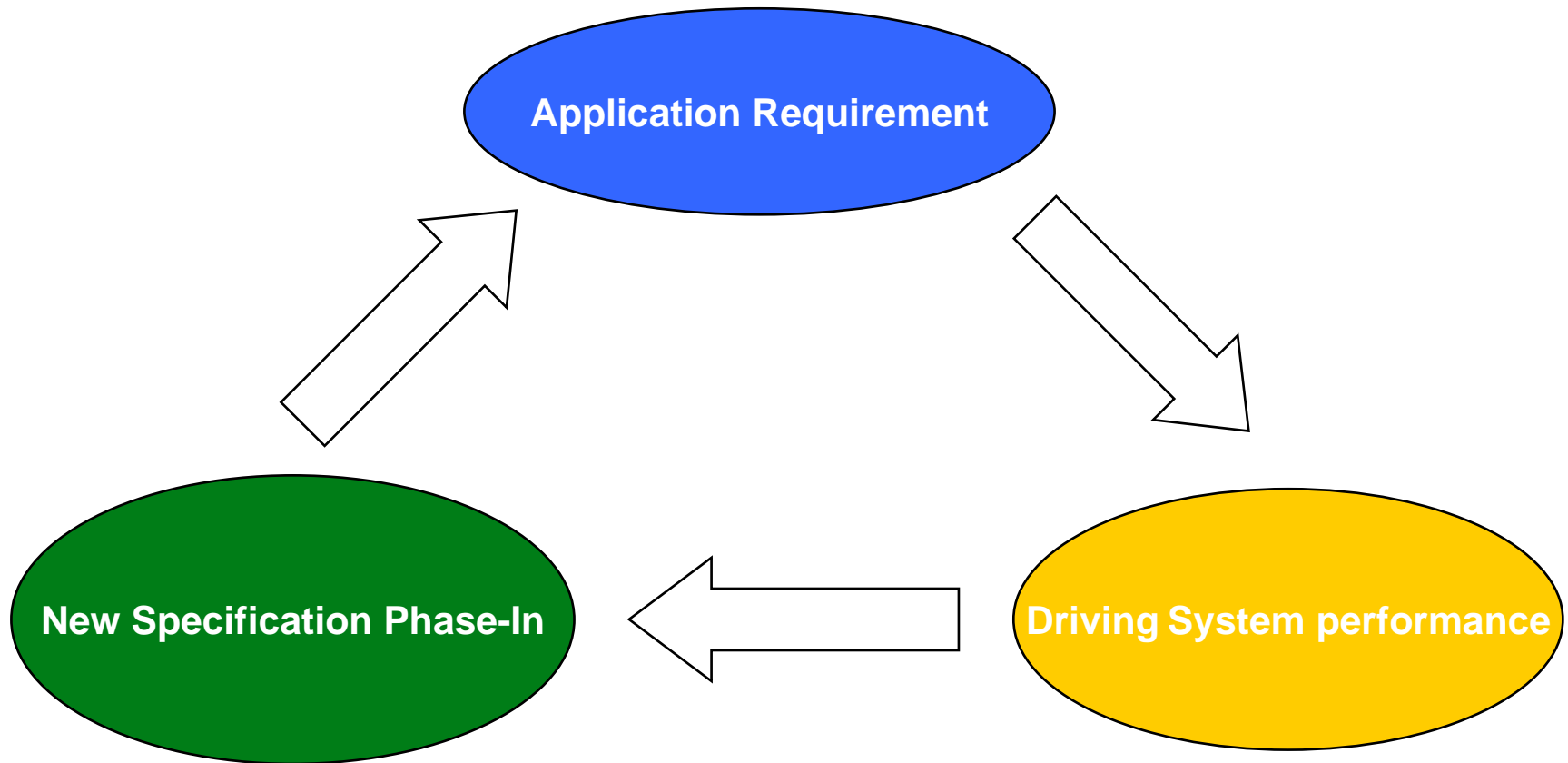
A woman with long dark hair, eyes closed, holding a crystal ball. The crystal ball shows a digital, pixelated landscape. The image is framed by a large, stylized circular graphic.

*Embracing
Digital Intelligence*

Content

- **PC application trend discussion**
- **VIA Product line briefing**
 - PCI-express generation
 - Smooth South bridge migration
- **VIA product Vista status update**
- **What new in VIA's new product**
- **Wrap-up**

Technical Specification Trend



Future Application Of X86 Platform

- **Multimedia** Center for Consumer Market Application---- PC + PVR + Data Backup + VoIP +...etc
- **Portable** Application----Origami, HaiKu..etc
 - 2nd Mobile PC !
 - Car Navigator !
 - Game Machine!
 - Portable Media Player!
 - PC phone!

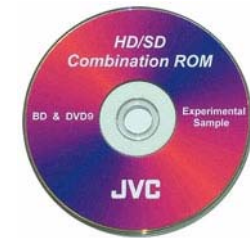
Multimedia Trend



352X240/352X288
MPEG-I
740MB



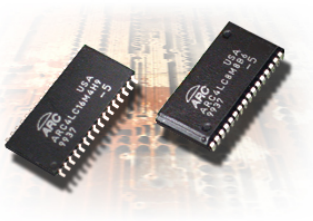
720X480/720X576
MPEG-II
4.7GB



1920X1080
MPEG-II/MPEG-IV
/H.264/WMV VC-1



Storage Media → performance



EDO DRAM



**SDRAM
PC-133**



**DDR SDRAM
PC-3200**



**DDR2 SDRAM
PC-6400**

DDR3



**PATA HDD
133 MB/s**

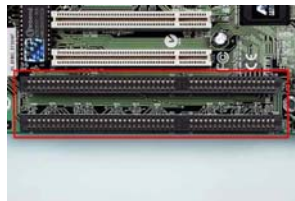


**SATA HDD
150 MB/s**



**SATA II HDD
300 MB/s**

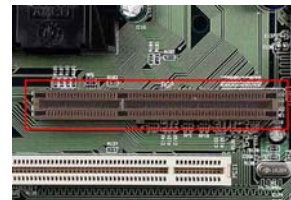
I/O BUS Trend



ISA
8 MB/s



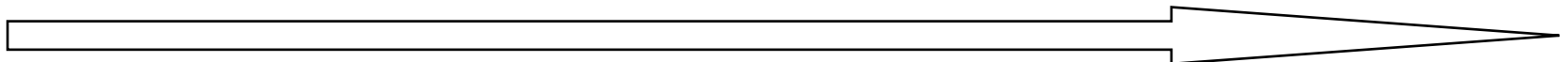
PCI
132MB/s



AGP
2GB/s



PCI - Express
250MB/s Per Lane,
one direction
4GB/s for 16 Lanes



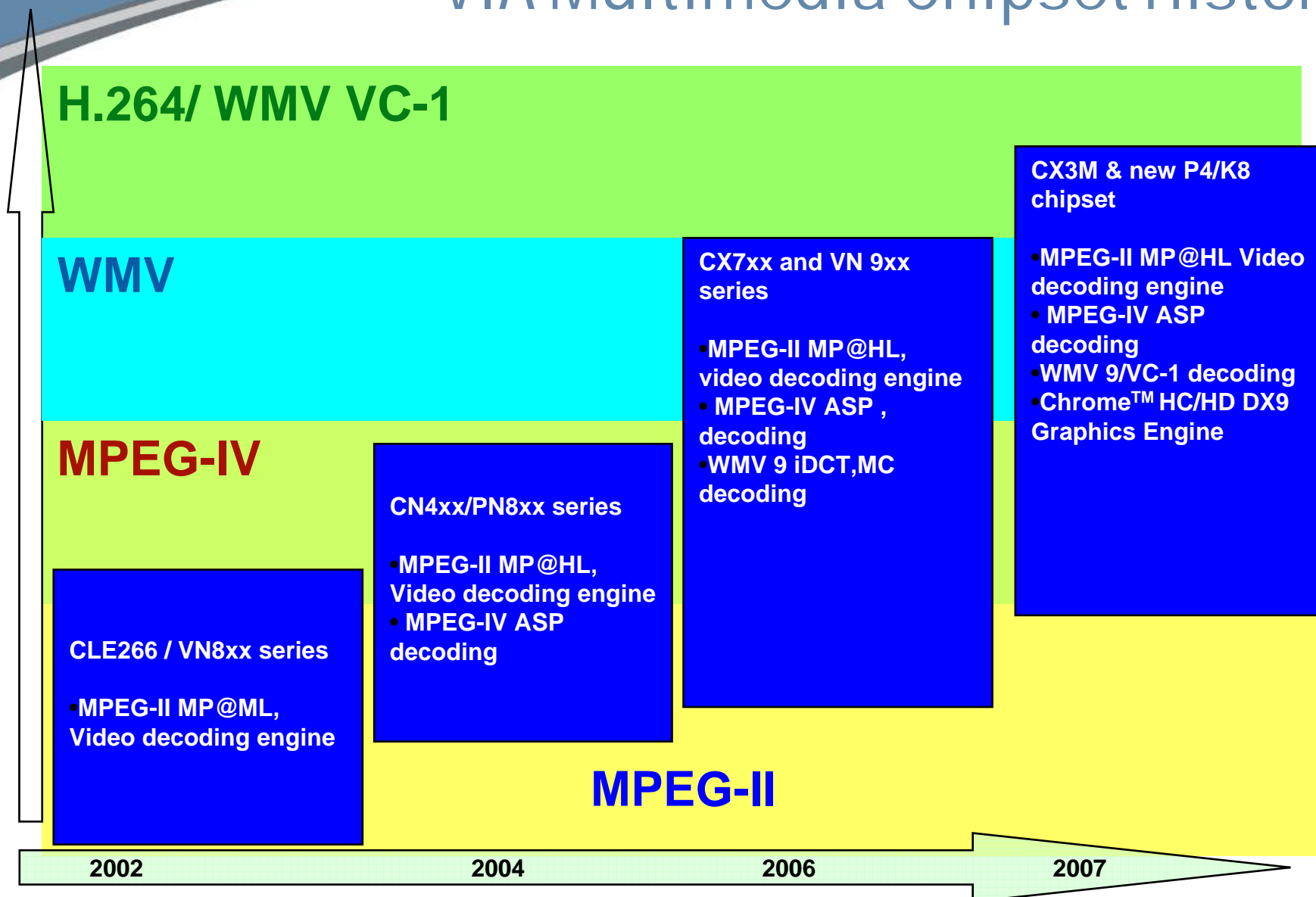
Graphics feature and display port

- **Hardware DirectX 9 Graphics Engine Support for Microsoft VISTA Compatible Requirement.**
- **Aero Glass** Feature Support
- **LVDS/DVI** Transmitter embedded Becomes A Trend
- **HDMI & UDI** support need to be considered for MCE & Digital Home Application Platform

Video Features

- **Enhanced Video Processing capability Is a major System Requirement**
 - Capability to decode High Definition Compressed Video Media
 - Standards like MPEG-IV, H.264 and WMV VC-1 should be supported
 - Offload the Processor, also help to reduce power consumption and heat problems.

VIA Multimedia Chipset History



VIA PCI-Express Chipset

Product Line

K8M890

- Chrome 9™ HC DX9 Graphics Engine
- DuoView Support
- PCI-Express Pro
- Video Decoding Accelerator



Pin2Pin
co-layout

K8T890

- PCI-Express x16
- 4 PCI-Express x1
- Ultra V-Link



Pin2Pin
co-layout

K8T900

- VIA DualGFX Express Pro
- Ultra V-Link



AMD Platform Chipset ----Pin-to-Pin

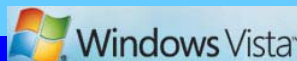
P4M890

- DDR 400/DDR 533
- UniChrome™ Pro DX7 Graphics Engine
- DuoView Support
- PCI-Express Pro
- Video Decoding Accelerator

Pin2Pin
co-layout

PT890

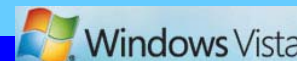
- FSB 1066
- DDR 400/DDR 533
- PCI-Express 16+1



Pin2Pin
co-layout

P4M900

- FSB1066
- DDR 400/DDR 667
- Chrome 9™ HC DX9 Graphics Engine
- DuoView Support
- PCI-Express Pro
- Video Decoding Accelerator



Intel Platform Chipset -----Pin-to-Pin

VIA Southbridge Product Line



VT8251

- 4 SATA gen II HDDs (3Gbps)
- SATA Advanced Host Controller Interface (AHCI) w/ NCQ
- 2 Lane PCI-Express
- HD Audio 192k / 32bit 8CH concurrent



VT8237S

Pin2Pin
co-layout

- SATA gen II support (3Gbps)
- HD Audio
- Pin compatible co-layout w/ VT8237A



Pin2Pin
co-layout

VT8237A

- HD Audio
- Pin compatible co-layout w/ VT8237R-plus
- MP: Now



VT8237R-plus

- Int. SATA ports for 2 SATA I HDDs
- 8 ports USB 2.0
- VIA 10/100 MAC
- 6 ch. AC'97 audio, HSP V.92



VIA Vista Driver Status Update

Function Chipset	Ethernet	USB	Audio	IDE	RAID
VT8251	In Box	In Box	In Box*	In Box	In Box**
VT8237A	In Box	In Box	In Box*	In Box	In Box**

* Driver will be built in Microsoft CTP-build 5270 and after version

** Driver will be built in Microsoft CTP-build 5285 and after version

VIA UMA Solutions for Vista

- **Window Vista logo requires WDDM/DX9 capable driver ready**
 - VIA UMA solutions support Basic logo
 - Premium logo requires further test report.
- **VIA Solutions:**
 - **K8M890**
 - In MP
 - WDDM driver is under testing now.
 - Support Aero glass
 - WDDM driver schedule:
 - Beta version has been released to VIA web site for customer download.
 - **P4M900**
 - ES on June 2006, MP in Q3 006

What's New In VIA Next Generation Chipsets ?

Design for future trends and customer needs

- **Support faster and newer FSB**
 - HT1 and HT3 Technology for AMD.
 - Faster FSB e.g, 1066/1333
- **PCI-E Generation II support**
- **DX9 for Vista Premium logo, DX 10**
- **DDR2/3**
- **Gbit MAC integration**
- **Video interconnect support for MCE and Digital Home**
 - DVI/LVDS/HDMI/UDI
- **Content protection-HDCP**
- **Advance Video HW Accelerator**
 - MPEG2/4, WMV9, VC-1, H.264.
 - Support for HD-DVD and BD playback
- **ASF support**
- **Raid support**
 - 2 drives for 0+1.
 - H/W and S/W RAID5
- **Special power saving design for longer Battery life**
 - Especially for Notebook Design.
- **SDIO, SPI**

Wrap-up

- **VIA always keep moving forward with the PC infrastructure**
 - DX9/DX10 Gfx, HQ Video I/O, storage, memory, I/O link, FSB, Video decoder...
- **Provide customers with products that have the best C/P ratio, that require minimum validation effort.**
- **Participate in new usage model creation.** –UMPC, PC1...
- **Connect with the world**
 - Leverage existing IP while trying to minimize the digital gap

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Thank You !

A woman with long dark hair, eyes closed, holding a glowing, textured sphere in her hands. The sphere has a metallic top and a textured, crystalline bottom. The background is dark, and the woman's face is softly lit.

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Digital Intelligence*